



00-113

August 18, 2000

Mr. Dale Hatfield
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, N.W.
Room 7-A-340
Washington, D.C., 20554

Re: **Final Service Disruption Report**

Dear Mr. Hatfield:

Pursuant to the requirements established in the Report and Order in CC Docket No. 91-273 (Amendment of Part 63 of the Commission's Rules to Provide for Notification by Common Carriers of Service Disruptions), **AMERITECH** submits the attached **Final** Service Disruption Report associated with a service disruption in **Battlecreek, Michigan** on July 21, 2000.

An Initial Service Disruption Report was faxed to the FCC's Monitoring Watch Officer on that date.

Please stamp and return the provided copy to confirm your receipt. Please contact me if you have questions regarding this service disruption.

Sincerely,

A handwritten signature in cursive script that reads "Jonathan J. Boynton".

Enclosures

CC: Bob Kimball
Kent Nilsson



A member of the SBC global network

Retention Period: 6 Years

FCC SERVICE DISRUPTION REPORT

FCC File Number: 00-113

Type of Report: ☐ Initial Report ☐ Update ☒ Final

Occurred: Date: 07/21/2000 Time: 09:08 EDT

☒ 50,000 or More Customers

☐ 30,000 - 49,999 Customers

Ended: Date: 07/21/2000 Time: 10:43 EDT

☐ Fire incident \geq 1,000 lines

Special Offices/Facilities

Duration (in minutes): 95 minutes

☐ 911

☐ Major/Medium Airport

☐ NCS Request

Geographic Area Affected: Battlecreek, Michigan

Estimated Customers Affected: 77,166

Type(s) of Services Affected: ☐ Local (Intraoffice) ☒ IntraLATA ☒ InterLATA ☒ 800
☐ LIDB ☒ Operator Services ☒ Interexchange ☒ Switched Access (interoffice)
☒ Cellular ☐ International ☒ E911/911 ☐ FAA ☐ All

Estimated Blocked Calls: 131,546

Apparent or Known Cause of the Outage: At 09:08 EDT, on Friday, July 21, 2000 the Battle Creek-Main and Battle Creek-South and the Bellevue, Marshall and Olivet remote switches experienced a loss of SS7 (Signaling System 7) connectivity due to a duplex failure of the "A" links to the Grand Rapids and Kalamazoo STP's (Signal Transfer Points). This condition existed because the duplex "A" links were working through an Alcatel 21130 fiber system that switched to the "B" protect side, which was not a working path at the time. The duplex SS7 "A" links for the affected offices were working on common equipment with diversified route protection.

A noisy power supply caused the Alcatel 21130 Fiber System to switch to the protect path, which was incapable of carrying traffic. In addition, alarm communications links were inoperable due to a defective DCP (Data Collection Processor) which masked the unavailability of the protect path.

The Marshall Public Safety Answering Point (PSAP) serving 7,310 lines was affected by the outage. At 09:28 EDT, 911 calls were rerouted to an alternate PSAP per contingency plan. There were no life threatening events that occurred during the outage. There was local media coverage of the event.

Direct Cause is failure of a T6X carrier system on an Alcatel 21130 fiber system and the unavailability of its "protect" path.

Root Cause is Procedural Service Provider due to Inappropriate Maintenance Execution.

Name and Type of Equipment Involved: Alcatel 21130 Fiber System

Specific Part of Network Involved: Toll Network

Methods used to Restore Service: Rerouted T-1 carrier systems which restored simplex SS7 connectivity to the Battle Creek switches.

Steps Taken to Prevent Recurrence:

Ameritech is establishing a team to further review diversity procedures for SS7 links and protect path availability.

Applicable Best Practices: Ameritech has reviewed the Best Practices in Network Reliability: A Report To The Nation, Section B, dated June 1993. Based on the root cause analysis of this incident the most appropriate focus areas are:

6.2.1.1 TA-TSV-000905, "Common Channel Signaling (CCS) Network Interface Specification", Issue 3, December 1992

- Section 7.2 gives CCS link diversity guidelines for STP-to-STP and STP-to-CCSSO interface architectures to meet CCITT, ANSI Committee T1 (see Chapter T1.111.6 of ANSI T1S1 Standards), and Bellcore (TR-NWT-000246) performance requirements for the CCS network. Also, Section 7.2.1 states that operations procedures should specify the following:
 - Link set diversity should be routinely confirmed.
 - Whenever maintenance or circuit order activity occurs on a link, or a failed link is restored, diversity of the combined link set should be confirmed.

Best Practices Used: Ameritech observes those Best Practices that are consistent with providing outstanding customer service.

Analysis of Effectiveness of Best Practices: While the linkset was diverse in accordance with Ameritech standards, further diversity was found to be available. Orders have been issued to further diversify the "A" links on a second SONet system.

Prepared by: Jim Lankford
Date submitted: 08/18/2000

Telephone: 210-886-4589
Time: 09:00 CDT

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*A member of the SBC global network*

Retention Period: 6 Years

FCC SERVICE DISRUPTION REPORT

Type of Report:

☒ Initial Report☐ Update☐ Final

Occurred: Date: 07/21/2000 Time: 08:08 CST

Ended: Date: Time:

Duration (in minutes):

- ☒ 50,000 or More Customers
☐ 30,000 - 49,999 Customers
☐ Fire incident \geq 1,000 lines
Special Offices/Facilities
☐ 911
☐ Major/Medium Airport
☐ NCS Request

Geographic Area Affected: Battlecreek, Michigan

Estimated Customers Affected: 56,000

Type(s) of Services Affected:

- ☐ LIDB ☐ Operator Services ☐ Local (Intraoffice) ☒ IntraLATA ☒ InterLATA ☐ 800
☐ Cellular ☐ International ☒ Interexchange ☒ Switched Access (interoffice)
☐ E911/911 ☐ FAA ☐ All

Estimated Blocked Calls: Under Investigation

Apparent or Known Cause of the Outage: At 08:08 CST, on Friday, July 21, 2000 a transport failure has isolated the Battlecreek Central Office from the toll network. Ameritech personnel are in the process of isolating the point of failure.

Name and Type of Equipment Involved: Under Investigation

Specific Part of Network Involved: Toll Network

Methods used to Restore Service: Under Investigation

Steps Taken to Prevent Recurrence: Under Investigation

Prepared by: Jim Lankford
Date submitted: 07/21/2000

Telephone: 210-886-4589
Time: 09:10 CST